

Meeting Notes

Project Name	OFFSHORE WIND & CCUS CO-LOCATION FORUM 3rd PLENARY MEETING
Meeting Venue	Held online via Microsoft Teams
Date & Time of Meeting	09:30 – 12:00 on Tuesday 9 th March 2022

Chair of the Meeting	Adrian Topham (The Crown Estate)
Names of the Attendees	<ul style="list-style-type: none"> ▪ Jonathan Love (OREC) – Secretary ▪ Amrit Madhoo (CES) – Member ▪ Nick Richardson (OGA) – Member ▪ Vianna Iancu (OGA) - Member ▪ Chris Gent (CCSA) – Member ▪ Benj Sykes (OWIC) – Member ▪ Andrew Russell (BEIS) – Member ▪ Amar Khuttan (BEIS) – Member ▪ Ronnie Parr (OGA) – Member ▪ Iain Harris (OGA) – Member standing in for Kristian Dahlstrom ▪ Bronagh Byrne (The Crown Estate) – Member ▪ Sian Wilson (CES) – Member

Item	Notes
1.0	<p>WELCOME AND INTRODUCTION</p> <p>The Chair opened the plenary meeting by welcoming everyone. Each attendee introduced themselves and gave a short explanation of their role in relation to offshore carbon storage and wind energy generation.</p>
2.0	<p>REVIEWING PREVIOUS ACTIONS & MINUTES FROM LAST MEETING</p> <p><i>Action 1) Pre-reading to be circulated ahead of next plenary session.</i></p> <ul style="list-style-type: none"> ▪ Chair confirmed this was complete, noting the brevity on this occasion. <p><i>Action 2) Organise meeting with ETA to discuss PM resources for workstreams 7 – 10.</i></p> <ul style="list-style-type: none"> ▪ The Chair confirmed the meeting was held and a proposal had been sent to progress workstreams. This will be reviewed, and the scope shared. <p><i>Action 3) Set up interim meetings with relevant parties surrounding WP4 before the next plenary session.</i></p> <ul style="list-style-type: none"> ▪ The Chair confirmed meetings were held and an update would be shared during this plenary session. <p><i>Action 4) Suggest dates for next plenary meeting to be held in February, agree and send invite.</i></p> <ul style="list-style-type: none"> ▪ Secretary confirmed the action was complete, with the meeting organised.

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	<p><i>Action 5) Updated Communication Policy to be circulated with the minutes for review.</i></p> <ul style="list-style-type: none"> ▪ The Chair confirmed that this action remained open (see note for action 6). <p><i>Action 6) TCE to update the Communications Plan to state that working groups should meet and update the forum before plenary sessions.</i></p> <ul style="list-style-type: none"> ▪ The Chair confirmed this action remained open and took an action to arrange for the policy to be updated and then shared out with the group, closing actions 5 and 6. <p><i>Action 7) Set up a workstream 4B and 5B for CES to actively reach out and discuss workstream activities with Marine Scotland.</i></p> <ul style="list-style-type: none"> ▪ CES confirmed this is underway with projects now specifically set up, though noted that the workstream documents have not yet been formally updated to reflect this. <p><i>Action 8) OGA to make the forum aware when the slides on spatial co-location project overview are available.</i></p> <ul style="list-style-type: none"> ▪ OGA confirmed that they would share an update on this during item 6 of the meeting. <p><i>Action 9) Forum members to consider if there are any wind farms or operators that would be willing to host a trial of gathering seismic data next to a wind farm.</i></p> <ul style="list-style-type: none"> ▪ The Chair asked members to share their updates on wind farm operators willing to host seismic trials next to their wind farm. ▪ OWIC confirmed Orsted are interested and open to discussions about hosting a trial in the Hornsea zone, potentially this summer. BS, RP and NR to speak and develop plans offline.
3.1	<p>UPDATE FROM ACTIVE WORKSTREAMS</p> <p>Workstream 1: Common OW/CCUS co-location oversight body</p> <p>The Chair updated on the status of the workstreams:</p> <ul style="list-style-type: none"> ▪ Workstream 1 (CLF) will remain ongoing. ▪ Workstreams 2 and 3, due to low relevance to the Forum at this time, are not being progressed. ▪ Workstream 4 is covered in more detail later in this meeting. Workstream 5 (Planning) would follow on from this work. ▪ Workstream 6 on seismic work will be commented on by OGA. ▪ Workstreams 7 to 10 have not yet kicked off. A proposal from ETA for project management is under consideration. 7 and 10 are expected to kick off before the next plenary. ▪ Workstream 11 (Wider Stakeholder Engagement) is in train. An initial meeting has taken place with a second planned for shortly after the 3rd plenary. <p>The Chair asked for feedback, especially regarding missing workstreams, but no comments were raised.</p>

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3.2	<p>Workstream 4: Spatial characterisation of high value CCUS and OW sites</p> <p>The Chair, in capacity as the member from TCE, advised that there was not a great deal to share, but provided the update as follows:</p> <ul style="list-style-type: none"> ▪ 'Capture readiness' has been the focus so far, with the output due to be shared shortly. OLWG has produced an interactive workbook that looks at capture volumes. It shows emissions levels by location and industry, categorising it by the carbon budget. ▪ BGS 'Storage readiness' study will kick off shortly. The focus of this study is on Storage Readiness Levels and its definition. This is complimented by the study looking at the remaining issues, with the goal being to increase the understanding of 'site readiness'. ▪ Regarding Spatial Characterisation, the relevance to the forum is to understand the number and likely locations of stores which will be needed, their timing and from which sources of CO₂. Four parties (OGA, TCE, CES and BEIS) have been working closely on the spatial evidence. Work is still at an early stage but expect a joint statement shortly. Website updates are also imminent. Output not expected to be a prescriptive but rather a description of timeline and governance processes. <p>Members commented that there is some lack of visibility across the two sectors regarding how process and governance works to achieve a fully permitted, licenced activity. BEIS noted this feedback.</p> <p>The section closed with TCE noting that this forum has enabled the work to get moving but there is still more to do before sharing more with the forum.</p>
3.3	<p>Workstream 6: Minimum requirements and technology development for MMV (Measurement, Monitoring, and Verification)</p> <p>OGA supplied an update on Workstream 6, commenting on the slide deck. They outlined that several projects are underway, with steady progress reported across each, including:</p> <ul style="list-style-type: none"> ▪ Pre-existing co-location report expected to be released April 2022. ▪ Rock physics study scope expanded from 4 to 5 wells: <ul style="list-style-type: none"> ○ Petrophysical analysis underway on all wells ▪ OBN technology: <ul style="list-style-type: none"> ○ Review of comparative costings for seismic streamer ○ Cost model on target for end of March ▪ Windfarm noise with Heriot Watt expected of June. <ul style="list-style-type: none"> ○ Literature review about to start, with data analysis to come. <p>Regarding seismic survey techniques, the OBN vs streamer costing was discussed, with OBN 5-10 times higher than streamer. Streamer costs may be in the \$5million region, with the OBN currently considerably more.</p> <p>OGA added that hybrid surveys were being investigated to reduce the high costs, and it was agreed to be an area for innovation, but still complex to understand.</p> <p>OGA concluded that widely spaced turbines could provide wide corridors (2km) where streamer may be plausible, as this is not recommended in closely spaced farms. This will be referenced in the upcoming report.</p>

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3.4	<p>Workstream 5: OW/CCUS planning using spatial characterisation</p> <p>The Chair explained that this line item was created so that once the mapping is complete, albeit with an explanation of limitations, a working group would be set-up to suggest how the information may be used by decision makers – either in safeguarding prime locations or to inform future leasing and licencing rounds, potentially based on storage volumes (MtCO₂e) and/or generation capacities (GW).</p>
3.8	<p>Workstream 7: CCUS and OW separation distances and additional traffic modelling</p> <p>RenewableUK have advised there is limited feedback from members and limited bandwidth to support these workstreams. OREC & NZTC have developed a proposal for the Chair (in TCE capacity) to consider and share.</p>
3.9	<p>Workstream 11: Wider marine engagement in co-location impacts</p> <p>TCE/CES confirmed there had been no further engagement since November. This is because stakeholders are interested in the outputs and keen to follow progress but would have little to add at this point.</p>
4.0	<p>AREAS OF FOCUS AND WORKSTREAM ACTIONS</p> <p>The Chair invited questions and the opportunity to address this item as a group.</p> <p>From offline discussion with RUK, it was queried how developers are being engaged. Members suggested alignment to avoid silos of activity. Holding a session for developers was suggested and met with general approval. The Chair recommended picking this up offline with a date in April or May to be agreed.</p> <p>The final comment was regarding time between surveys and how this could be used. Members asked if floating turbines could get moved, as it required an innovative solution coming from a wind technology perspective rather than a seismic one. They asked if this could be shared with developers. The Forum would consider these questions for the following meeting.</p>
5.0	<p>NEXT MEETING DATES (WORKSTREAMS, NEXT PLENARY, ETC.)</p> <p>The Forum agreed to select 4th Plenary meeting date during the meeting, rather than sending a survey.</p> <ul style="list-style-type: none"> ▪ 4th Plenary session agreed to take place on 15th June, 09:30 – 12:00 via MS Teams. <p>OWIC, CCSA would agree with the Chair a date for meeting and sharing with developers.</p>

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6.0	<p>AOB</p> <p>The CCSA are working on delivery of the CCUS industry by 2035, including what storage may be needed to achieve a 50 million ton per year target. They advised the piece would be published in two or three weeks and the Forum should read it to feed into spatial discussion.</p>

MEETING END

Owner	Action List
Chair	<ol style="list-style-type: none"> 1. Pre-reading to be circulated ahead of next plenary session. 2. Circulate ETA proposal for PM & support on Workstreams 7 – 10 3. Set up interim meetings with relevant parties surrounding WP4 before the next plenary session. 4. Agree date for sharing and communicating approach with Developers in May / June
Secretary	<ol style="list-style-type: none"> 5. Suggest dates for next plenary meeting to be held in June, agree and send invite. 6. Updated Communication Policy (6) to be circulated with the minutes for review.
TCE	<ol style="list-style-type: none"> 7. TCE to update the Communications Plan to state that working groups should meet and update the forum before plenary sessions.
OGA	<ol style="list-style-type: none"> 8. Offshore Wind farm to host a trial to gathering seismic data, BS, RP and NR to speak and develop plans offline.